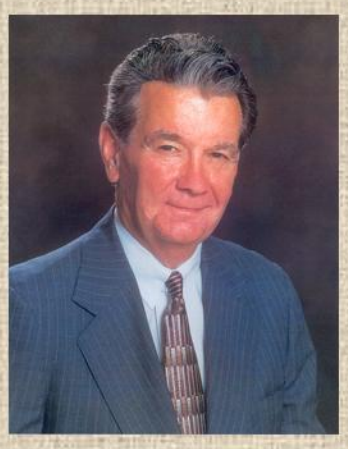
HAMPDEN COUNTY REGISTRY OF DEEDS

DAMS FILE COLLECTION

BOOK D02

TOWN OF BLANDFORD, MASSACHUSETTS



Donald E. Ashe,
Hampden County Register of Deeds

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Lee Dam

1926 Blandford

Dam located on Wheeler Brook. Owned by Arthur Lee; formerly owned by Springfield City Water Works and formerly by the Waite Brothers.

City/Town	Agawam
Dam	Lee Dam
Dam	Springfield City Water Works Dam
Dam	Waite Brothers Dam
Name	Waite
Name	Lee, Arthur
Name	Springfield City
Water	Wheeler Brook

April 28, 1926

Mr. Arthur Lee,
North Blandford, Mass.

Dear Sir:

In accordance with the provisions of Section 45 of Chapter 253 of the General Laws as amended by Chapter 334 of the Acts of 1923 and as further amended by Chapter 178 of the Acts of 1924 relative to the inspection, condition and safety of the dams of Hampden County, you are notified that your dam, located on Wheeler Brook so-called in the Town of Blandford, has been inspected by our engineer and your attention is called to the following recommendations made by him;

> "The dam is not in very good condition, and is practically abandoned. Inasmuch as the pond formed by it is very small, should the structure fail, it does not seem as if any material damage would be done by the released water. If the pond, however, is to be maintained, the structure should be repaired."

Yours very truly,

COUNTY COMMISSIONERS

_____
Chairman.

_____

_____

Arthur Lee
North Blandford Mass.

you are notified that your dam, located on Wheeler Brook so called in the Town of, Blandford, etc.

"The dam is not in very good condition, and is practically abandoned. Inasmuch as the pond formed by it is very small, should the structure fail, it does not seem as if any material damage would be done by the released water. If the pond, however, is to be maintained, the structure should be repaired."

Black Brook Dam

1970 Blandford

"Bradley Brook Watershed Project. Black Brook Multi-Purpose Dam, Hamden County, Mass." File No MA-371P. Jan-Feb-Mar- 1970. See also: County Roads Plan #5 (1970) "Black Brook Multiple Purpose Dam"

City/Town	Blandford
Dam	Black Brook Dam
Name	U S A Agriculture Soil Conservation
Water	Black Brook
Water	Bradley Brook

GEORGE H. McDONNELL
PHILIP W. SHERIDAN
EDWARD J. BAYON

TIGHE & BOND CONSULTING ENGINEERS

CIVIL, SANITARY AND ELECTRICAL ENGINEERING
INVESTIGATIONS, REPORTS, PLANS AND SPECIFICATIONS
SUPERVISION OF CONSTRUCTION AND OPERATION

BOWERS AND PEQUOT STREETS
HOLYOKE, MASSACHUSETTS
TEL. JEFFERSON 3-3991

CD Blandford
April 23, 1970

The Honorable the Board of County Commissioners
52 State Street
Springfield, Massachusetts

Re: Black Brook Multiple-Purpose Dam
Blandford

Gentlemen:

The undersigned has made a review of the plans and specifications of the above subject dam as filed by personnel of the U. S. Dept. of Agriculture, Soil Conservation Service. The plans and specifications were brought to the office of the undersigned by personnel of the Soil Conservation Service and these were delivered to the office of your Honorable Board on April 1st.

The plans consist of 28 sheets and are entitled "Bradley Brook Watershed Project, Black Brook Multiple-Purpose Dam, Hampden County, Mass." The drawings are designated File No. MA-371P and in general, are dated in the months of January, February and March of 1970.

The specifications cover all of the items of work as proposed on the drawings and they provide additional information to the contractor relative to the manner in which the work will be accomplished, quality of materials, methods, etc.

The dam as proposed, is to be an earth embankment, approximately 56 ft. in height above the bed of the stream. The embankment will have slopes of 2.5 horizontal to 1.0 vertical. Both the upstream and the downstream face of the embankment will be paved with equipment placed riprap 2 ft. in thickness laid upon 12" of bedding.

The width of the dam at the top is to be 18 ft.

Seepage through the dam embankment material will be collected by a chimney-type drain as shown on Sheet #6 of the drawings. This drain will be constructed of pervious material and will discharge collected water to a drainpipe buried in the embankment which in turn will discharge to the stream bed, at the embankment toe, near the outlet from the principal spillway.

The principal spillway will consist of a vertical concrete shaft which will rise from a floor elevation of 840.0 to a crest elevation of 876.0. In the side wall of the principal spillway shaft will be located an orifice with a crest elevation of 863.5. This orifice will control the surface elevation of the permanent pool to be formed by the dam. Thus, the elevation of the permanent pool will be 23.5 ft. in depth above the floor of the vertical spillway shaft.

During flood flow conditions, the dam will store inflowing water beyond the capacity of the orifice, up to the riser crest elevation of 876.0, when the principal spillway will begin to operate.

All water discharged into the principal spillway either through the orifice, which normally will control the permanent pool elevation, or over the crest of the top of the shaft, will be passed through the dam embankment in a 36" diameter pipe laid on a concrete cradle.

Water discharged from the 36" pipe will pass through an outlet facility which will serve to decrease the velocity and reduce the force of the discharged water.

To prevent seepage along the outside of the principal spillway pipe and its supporting concrete cradle, there will be six reinforced concrete anti-seep collars constructed. The principal spillway and all of its related facilities will be built upon well compacted impervious soil.

There will be an 18" drawdown pipe with an inlet facility extending up into the permanent pool from the bottom of the principal spillway vertical shaft. A gate operated in the shaft will control the 18" drawdown pipeline. A coarse rack together with stoplogs will be installed on and in the inlet facility at the upstream end of the 18" drawdown pipeline.

An emergency spillway will be constructed around the dam to provide capacity for flood flows exceeding the capacity of the principal spillway. The emergency spillway will be constructed around the right end of the dam embankment as shown on Sheets 2, 3 and 5 of the drawings. A cross-section of the emergency spillway is shown on Sheet #7 of the drawings

and profiles along the spillway are shown on Sheet #10 of the drawings.

It can be observed that the principal spillway will be excavated deep in natural, undisturbed soil, and a portion of the spillway will be excavated in ledge.

A sufficient number of borings were taken at the site of the proposed dam and the information gathered from these borings as shown on Sheets 7 and 23 thru 27 inclusive, indicates that the foundation material is suitable to support the dam embankment and the material at foundation elevation is sufficiently impervious to prevent undesirable seepage through the foundation and under the dam.

The plans and specifications call for the proposed embankment to be built upon a foundation that is properly prepared and properly excavated. The exact method of preparation of the foundation will be controlled by conditions encountered in the field, as described in the specifications and as shown on the drawings.

The drainage area upstream of the proposed dam is approximately 2.4 square miles. The spillway facilities as provided are capable of safely passing anticipated flood flows from the drainage area. The dam will be capable of impounding 864 acre feet of water for flood water retarding purposes up to the crest elevation of the emergency spillway.

Seventy-four acre feet or approximately 25 million gallons of water will be stored by the dam for use by the Town of Russell as a water supply. The location of the proposed dam is upstream on Black Brook from the present water supply reservoir of the Town of Russell. Water stored by the proposed dam can be released when needed, by the Town of Russell, to flow downstream and replenish its reservoir should it become depleted.

A review has been made of the design report for the dam including the geology report and the report on soil testing. Specifications covering all items of the work were also reviewed. In the opinion of the undersigned, they are satisfactory.

On the assumption that the construction work as described and set forth on the reviewed plans and specifications will be done in an efficient, high quality and workmanlike manner with full-time construction inspection by properly trained personnel, and on the assumption that proper flood control and protective measures will be incorporated in the work during construction, it is recommended to your Honorable Board that the plans and specifications be approved.

TIGHE & BOND CONSULTING ENGINEERS

In approving the plans and specifications, it is recommended that your Honorable Board advise the owner and the Soil Conservation Service that approval is contingent on the following:

1. All foundation work should be carefully done and existing ground properly excavated and placed to receive the embankment material.

2. Particular care be exercised to construct the principal spillway facilities and cradle on a sound foundation and that proper compaction be obtained below, at, around and on top of these facilities, including the anti-seep collars.

3. The chimney drain together with all of its related construction must be built and shaped with care so that there will not be any plugging of the voids of the drain through improper construction procedures nor will there be movement of adjacent fine grained material of Zone 1 and Zone 2 fill into the pervious drain fill proper. Care should also be exercised in constructing the drainpipe and its related pervious drain fill.

4. The method for passing stream flow through the construction area shall be such as not to endanger the dam during its construction nor endanger persons and property downstream. Construction of the embankment must be scheduled and the work carried on to take advantage of the dry weather construction season, and the contractor must include any necessary coffer dams and temporary spillways needed to pass flood flows during construction.

Respectfully submitted,

George H. McDonnell

George H. McDonnell
County Hydraulic Engineer

GHM/amd

Blair Dam

- **Blandford**

Also see: Report section - Blandford.

City/Town	Blandford
Dam	Blair Dam

BLANDFORD
D02003

BLAIR DAM

NO IMAGE ON FILE FOR THIS RECORD

(INFORMATION EXISTS ONLY ON A FILE CARD FROM THE OFFICE OF THE FORMER HAMPDEN COUNTY ENGINEER.)

Borden Brook Reservoir Dam

- **Blandford**

Also see: Report section - Blandford. See also: County Highway Book 5 Page 65 (ch05065). See also: County Roads plan #6 (1908) "Borden Brook Dam-Contract #5".

City/Town	Blandford
Dam	Borden Brook Reservoir Dam
Name	Springfield City Water Works
Water	Borden Brook Reservoir
Water	Borden Brook

BLANDFORD
D02004

BORDEN BROOK RESERVOIR DAM

NO IMAGE ON FILE FOR THIS RECORD

(INFORMATION EXISTS ONLY ON A FILE CARD FROM THE OFFICE OF THE FORMER HAMPDEN COUNTY ENGINEER.)

Brown Dam aka Hayden Pond Dam

1953 Blandford

Springfield City Water Works listed as owner. Located on Birch Brook and Hayden Pond adjacent to Cobble Mountain Road.

Abutters	Springfield City Water Works
City/Town	Springfield
City/Town	Blandford
Dam	Brown Dam
Dam	Hayden Pond Dam
Name	Woldren, W C
Name	Brown, Charles A
Streets	Cobble Mountain Road
Water	Hayden Pond
Water	Birch Brook

October 14, 1953

Mr. W. C. Woldren
Cobble Mountain Road
Blandford, Massachusetts

Dear Sir:

In accordance with the provisions of Chapter 253, Section 45 et seq. of the General Laws, Tercentenary Edition, relative to the inspection, condition and safety of the dams of Hampden County, you are hereby advised that your dam located at Hayden Pond, formerly known as "Brown Dam", and located on Birch Brook adjacent to Cobble Mountain Road, has been recently inspected by our Engineer, and your attention is called to the following conditions noted and recommendations made by him:

> "This dam is dilapidated somewhat and from erosion noted on its top, high flows have evidently gone over the entire structure. Because construction of the dam has been with stone as well as earth fill, and due to certain large trees near the downstream face, loss of the structure by overflow is not expected. However, further damage to the structure will occur unless proper maintenance and repairs are made. Loss of the structure would not be rapid and consequently would not be serious downstream. However, it is recommended that existing conditions be called to the owner's attention."

Any further information concerning this matter which you may desire will be furnished by this office, upon request.

Very truly yours,

COUNTY COMMISSIONERS

By _____
Chairman

_____

_____

Cobble Mountain Dam

1930 Blandford

Springfield City Water & Sewer Commission owns and maintains the Cobble Mountain Dam & Reservoir.

The Cobble Mountain Dam was finished in 1931-1932 and retains its title as the largest hydraulic filled earthen dam in the world. The dam rises 263 feet and the reservoir holds 25.5 billion gallons of drinking water. The water is gravity fed to the West Parish Filtration Plant in Westfield and is pumped to surrounding communities using its own hydroelectrc pumping station located in Granville, which uses three water wheels to generate 30.6 megawatts.

The Springfield Water & Sewer Commission and the engineering company CDM received the American Council of Engineering Companies 2008 Grand Award for first-of-a-kind plugging system repairs completed for $1.99 million less than Springfield's $2.1 million design and construction buget.

See Also: Hampden County Dams, Tighe Report 1928 (D25093) & Hampden County Dams, Tighe Report 1937 (D25080).

Also see: County Highway Plan Book 8, Pages 30-38 (ch08030); Book 8, Page 69 (ch08069); Book 8, Page 93 (ch08093) & Book 9, Page 44 (ch09044); Book 11 Page 26 (ch11026) and Book 17, Pages 45-50 (ch17045), Book 18 Pages 1-30 (ch18001), Book 10, Page 6 (ch10006).

See also: Dams - Westfield -"Great River Dam fka Horton Dam aka Turner Falls Power & Electric Company Dam aka Westfield Dam" - D21012.

City/Town	Blandford
City/Town	Springfield
Dam	Cobble Mountain Dam
Name	Hall, P N
Name	Little, C J
Name	Springfield City Water Works

Copy Report

To Hampden County

On Stability of

PROPOSED COBBLE MT. DAM

July 1938

TIGHE & BOND
CONSULTING ENGINEERS
189 HIGH STREET, HOLYOKE, MASS.

July 5, 1928.

The Hon. the Board of County Commissioners
of Hampden County, Massachusetts,
George S. Cook, Chairman.

Dear Sir:

In compliance with your instructions we have examined, relative to its stability, the plans and specifications, filed for your approval on May 16th last, of the Proposed Cobble Mountain dam to be built by the City of Springfield across Little River.

The site of the proposed structure, which is a narrow gorge having steep slopes rising some hundreds of feet above the streambed, is about two miles upstream from the present intake reservoir of the City of Springfield in the south-west corner of the Town of Russell.

Its upstream end juts for a short distance across the Russell-Blandford boundary line and is about six hundred feet or thereabouts northerly from the point common to the towns of Russell, Blandford and Granville.

The drainage area of the stream above the proposed dam is, in Round numbers, forty-six square miles. Of this area, eight square miles are contributory to the Borden Brook storage reservoir, built by the City of Springfield in 1909. This reservoir is located about two and a half miles westerly from the proposed dam in the towns of Blandford and Granville. It has a surface area of 213 acres and a capacity of 2½ billions of gallons, impounded by an earthen dam 75 feet in hight.

Borden Brook, upon which the reservoir is located, is a tributary of Little River which it enters at a point about six-tenths of a mile upstream from the site of the proposed dam. The latter is also to be an earthen structure built by what is known as the "hydraulic-fill process. According to the plans, when completed, it will be 235 feet high above the streambed with its top at elevation 965. Its length along the base will be 60 feet and along the top 700 feet. Its width at the base will be

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1505 feet and at the top 50 feet. These figures show that its average width will be about twice its average length.

These figures also show that the natural rising slopes of the valley from the streambed, against which the ends of the dam will abut, are very steep, being on the average one vertical on 1 1/3 horizontal or about the natural slope of ordinary earth. The slopes of the proposed dam are very much flatter being on the upstream face, on the average, one vertical on 3½ horizontal and, on the downstream face, one vertical on three.

The reservoir formed by the dam will have a surface area of 1031 acres and, in round numbers, a capacity of 20 billions of gallons, that is, about eight times the capacity of the Borden Brook reservoir. From it will extend two tunnels, one on the north side of the stream, known as the diversion tunnel and the other on the south side of the stream, known as the pressure tunnel. The latter will convey the reservoir water to the proposed hydro-electric power house, whence it will be discharged into the present intake reservoir.

The head or portal of this tunnel will be located at a point nearly half a mile away from the site of the proposed dam at an elevation of 135 feet below the top of the dam and 115 feet below the crest of the spillway. Its length will be in the neighborhood of 7000 feet and discharging capacity, under full reservoir, 300 millions of gallons or thereabouts per day.

The diversion tunnel, on the opposite side of the stream and now nearly completed, is for the purpose of diverting the flow of the stream during the construction of the dam and of drawing off and emptying the reservoir if ever necessary.

It is driven through the mountain in a location outside the site of the proposed dam, from a point in the streambed 1200 feet or thereabouts above the upstream toe to a point in the streambed 200 feet or thereabouts below the downstream toe. The length of the tunnel is 1550

feet while the length of the stream connecting its ends is about 3000 feet or practically twice that of the tunnel owing to the U-shaped course of the stream. The discharging capacity of this tunnel is 4000 cubic feet per second or a capacity sufficient to discharge the Borden Brook storage in one day.

During the construction of the proposed dam it is expected to bye-pass the total flow of the stream through this tunnel without backing up water or forming any pondage except in times of extremely high flood flow.

The construction of this tunnel will obviate the necessity of laying outlet pipes through the proposed dam thus eliminating entirely one of the most troublesome and dangerous accessories of the reservoir earthen dam.

Safe earthen dams can be and have been constructed by the thousand with outlet pipes laid through them, nevertheless, these pipes are always an element of danger and as a matter of fact, more failures can be attributed to them than to any other cause with possibly the exception of inefficient spillways.

This brings us to the spillway of the proposed dam. It will be located, not in the customary place, that is, at or adjacent to one end of the structure, but at a considerable distance therefrom and on the same or south side of the stream as the pressure tunnel. Its crest will be about midway between the dam and pressure tunnel, approximately 1500 feet from either, and its discharging end 2700 feet or thereabouts downstream from the downstream toe.

Considering this latter distance of 2700 feet between toe and discharge end, and the fact that the elevation of the streambed at the latter point is some 50 feet lower than the streambed at the toe, it can easily be seen that there should be no danger of toe erosion from backwash even in the highest floods.

The crest of the spillway is 135 feet in width and 20 feet lower than the top of the dam,

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being at elevation 945. From the crest, the spillway gradually narrows and rolls off in an ogee curve for a distance of 165 feet to a point where its width will be 50 feet and its elevation 15 feet lower than the crest. From this latter point it will continue the same width to the top of the slope overhanging the streambed, the distance being about 950 feet or a total distance from crest to streambed of a little over 1100 feet.

The spillway, for a stretch of about 700 feet from the crest, will be in deep rock excavation, running from an average cut of 35 feet to a maximum of 50 feet, and will be crossed by a reenforced concrete arched bridge at a point about 145 feet from the crest.

This bridge will span the channel, thus having no supporting piers therein to obstruct the free passage of the water, and will be set at such an elevation that the inside of its crown will be two feet higher than the top of the proposed dam and 35 feet higher than the bottom of the spillway channel underneath it. From these figures it can be seen that the bridge will offer no obstruction to the free discharge of water in the spillway.

In regard to the discharging capacity of the spillway, computations show that with the hight of the reservoir at the " danger line", so to speak, which as computed in this case, should be not less than 6 feet below the top of the dam, the ample allowance be made for wave action, the rate of discharge over the crest of the spillway, that is, under a head of 14 feet, would be three and a half times the maximum recorded rate of flow of Little River at that point.

This rate of discharge over the crest of the spillway would be 465 cubic feet per second per square mile of drainage area contributory, or a rate about three times as high as the maximum recorded rate of the Westfield River in the phenomenal storm of December 1878.

These figures show an adequate factor of safety of spillway capacity without placing any value on the very desirable effect the new storage would have on the flood flows of the stream as they reach the reservoir where their intensities

or peaks would be smoothed out, if not entirely dissipated.

To put the capacity of the spillway in another light, it may be said that it would be sufficient, without endangering the dam, to discharge a flood flow of the same intensity as the maximum flow of the Westfield River in 1878, increased by that from the Borden Brook reservoir assuming that the latter were suddenly released and instantly discharged into the new reservoir.

A spillway, then, cut through the solid rock in a location more than a quarter of a mile away from the dam and having a discharging capacity as shown, may be considered a safe, stable and efficient appurtenance of the proposed development.

Because of the hight of the rock-ledge walls of the spillway, which as stated will be 35 feet on the average and 50 feet at one point, the danger of rock-slip after the completion of the excavation has to be considered and guarded against, in case there might be any reason to expect such an occurrence.

The plans indicate flashboards 7 feet in hight on the crest of the spillway. Inasmuch as there are no details given regarding their type or arrangement, whether fixed or automatic, to be used temporarily or permanently, it is assumed that it was not the intention to have this matter considered by the County now nor probably until after the completion of the dam. This, of course, does not apply to the 6-inch wrought iron sockets inserted in the crest and flush with it to receive the flashboard pins.

In view of the magnitude of the proposed dam, its novel construction at least in these parts, and the great responsibility incurred by its erection, a few words by way of comparison with other earthen dams may not be out of place here.

The construction of earthen dams is supposed to have begun in Egypt hundreds of years before the Deluge when earthen embankments were constructed for irrigation purposes and for

confining the Nile within its banks.

In other eastern countries earthen dams were also constructed at a very early date. Some of these are still in use, like the Veranum dam in India, a structure 12 miles long and forming a reservoir that covers an area of 35 square miles. These primitive structures, however, were simply mounds of earth built by slaves who carried the material to the site of the dam in baskets and consolidated it by trampling it in.

Since the time of the first builder of dams thousands of years have passed in the experience and practice of the art , illustrated unfortunately by many disastrous failures, yet the modern type is still a mound of earth, having changed very little fundamentally from its antedeluvian ancestor.

There is, however, a great difference in the methods of construction inasmuch as the mound is not raised with earth carried and trodden in by slaves but by steam shovel, truck and roller and by water pressure and water pools.

The original earthen dam was a homogeneous embankment from top to bottom, that is, one in which the material was alike throughout. This continued to be practically the sole type of earthen dam until modern times when it was modified by the introduction of an impervious core-wall to cut off percolation through it. For this purpose, British practice favored and still favors a clay puddle core-wall while American practice favored a masonry wall.

Clay puddle core-walls never appealed to the American engineer probably because of the unreliable character of clay which when drying shrinks and cracks and when wet expands and becomes unstable. In the western states of this country masonry cores were seldom used and some of the highest earthen dams were constructed without them. Some decades ago they were very popular in the Eastern states especially in New England. Within recent years, however, masonry cores have lost much of their popularity inasmuch as many engineers consider them an element of weakness. One of the objections is that the rigidity of the masonry and the flexibility of the earth produce unequal settlement.

To meet this objection and probably for economical reasons also, where cores are advisable, because of the character of the construction material not being desirable from the standpoint of imperviousness, they are sometimes built of compact surface soil. As an example, the Scituate earthen dam completed in 1926 for the water works of the City of Providence, has a surface soil core 77 feet at its greatest width built in six-inch layers with surface stripping removed from the site of the reservoir. The dam is 3200 feet in length and 100 feet in hight above the streambed, with its core extending to the solid ledge in a trench 80 feet deep.

Where the material for its construction is suitable, the homogeneous type of dam is in favor again. Borden Brook dam is a good example of this type for it has no core-wall and the material therein is practically alike and of the same density throughout its whole mass. In the construction work of both the homogeneous and the core types, the earth from the borrow-pit in its natural state barring stones above a certain size, is deposited in layers and compacted by rolling.

The difference between the two types is, that in the one case, efficiency depends upon the degree of imperviousness and stability of the whole embankment and in the other merely upon the degree of imperviousness of the core-wall and the stability of the embankment on easch side to support it in place. There is no difference, however, between these types regarding their foundations as it is just as necessary that the foundations of the one be solid and watertight as of the other.

The homogeneous and the core-wall types, therefore, represented in general all earthen dams of any magnitude until the hydraulic-fill dam, that is, the type under consideration was introduced. This type is a product of the West being originated and developed in the mining regions of California where the methods used in hydraulic mining were applied to earthen dam construction.

These methods were the tearing down of sand cliffs, banks of earth etc. by the application

of water discharged through nozzles under pressure, and the removal of the material thus disintegrated by means of water conducted in sluices etc. to some desired point below, where it would be deposited in a semi-liquid condition.

In the application of these methods to dam-construction where the material is sluiced from the banks and deposited in the dam, the construction is called "hydraulic-fill". On the other hand, where the material is not sluiced but hauled in its natural state to the outer edges of the dam and then washed into place by water under pressure, the construction is called "semi-hydraulic fill". Hence the terms, "Hydraulic-fill" and "Semi-hydraulic fill" dams.

The distinction, as seen, applies only to method of construction inasmuch as the results in either case are the same so far as efficiency and stability of the structure are concerned. In the dam in question, according to the specifications, the contractor will be allowed his choice of these methods of construction.

At first, the hydraulic-fill dam was naturally a small structure and, no doubt, built only in a crude way, probably for the forming of temporary ponds in the mining districts. Since then, however, owing to its design and construction being based on more scientific lines regarding safety and efficiency, it has gained greatly in popularity and today where the local conditions are favorable, the hydraulic or semi-hydraulic fill dam is considered an efficient and a most economic type of high earthen dam, especially for structures higher than 120 or 130 feet. In the ordinary dam, whether of the homogeneous or core type, when its hight goes beyond this, the hauling and placing of the large massof material required for the construction, is likely to make the cost prohibitive.

Being of western origin, neither the hydraulic nor semi-hydraulic fill dam is as yet very common in New England and it is only a year or so ago that the first, a semi-hydraulic fill was built in Massachusetts. The plans of this dam, known as the Sherman dam were examined for Franklin County by the writer. It is 100 feet in hight and was built by the New England Power Company across the Deerfield river at a point about a half a mile downstream from the Vermont line.

TIGHE & BOND
CONSULTING ENGINEERS
159 HIGH STREET, HOLYOKE, MASS.

Previously there were two dams of the same type built by the same company across the head waters of the Deerfield river in Vermont. One of these, known as the Somersett dam was completed in 1914 and is 110 feet in hight while the other known as the Davis Bridge dam, located near Readsboro, was completed in 1923 and is 200 feet in hight. Its length along the top is 1250 feet. Its width at the top is 25 feet and at the base 1300 feet with an average slope on the upstream side of about one vertical on 3½ horizontal and on the downstream side of one vertical on 3 horizontal.

It will be observed that the slopes of this and the proposed dam are similar. It will also be observed that the top of the proposed dam is 25 feet wider than the top of the Davis Bridge dam thus showing that the former is heavier in section than the latter.

When the Davis Bridge dam was completed, and that is only five years ago, it was one of the few very high earthen dams in the world and the highest in New England. When the proposed Cobble Mountain dam is completed it will not only have that distinction, but so far as the writer knows will be somewhat higher than the highest earthen dam in thw world at the present time.

The hydraulic or semi-hydraulic fill dam, like the ordinary masonry core structure described above, consists of a core and two embankments. The core, however, is much larger in the hydraulic type, being generally the middle third of the dam, or at least having a width not less at any point than the hight of the dam above that point. It is formed in a pool of water maintained between the embankments.

Both core and embankments are constructed of the natural earth brought to the site of the dam by sluicing or hauling and deposited on the outside of the embankments whence it is washed towards the middle of the dam, the coarsest material remaining at the outside, while the rest is carried by the water, gradually sinking as it flows, the coarser first, the medium next and the finest last at the center of the pool. This last on precipitation forms the impervious core while the coarser material forms the embankments which become more and more pervious towards their toes.

If the particles forming the core are very fine the core may be so completely watertight that it may take a long time, even years, after the structure is completed, before it drains and becomes hard or thoroughly consolidated. The grade of fineness, therefore, of the particles of the core material is most important in the construction of the hydraulic-fill dam since on the one hand, the particles must be small enough to make a watertight core and on the other hand of such size as to allow drainage in order that consolidation may occur within a reasonable time.

The core in a semi-liquid condition is much heavier than water and therefore exerts a greater pressure upon the embankments supporting it than if thesemi-liquid were replaced by water.

Water pressure against a dam does not depend upon the volume of water in the reservoir formed thereby, even though the reservoir may extend for miles around, but upon the hight of the water at the face of the dam. Similarly, the pressure exerted by the semi-liquid core against both embankments depends upon its hight and not upon its volume.

In the construction work, therefore, if the completed core were still a semi-fluid or even plastic, the pressure on each embankment would be greater than any water pressure on the dam after completion. Accordingly, the hydraulic-fill or semi-hydraulic fill dam is weakest during construction, because at this time it is nothing more than two slender embankments, so to speak, each resisting a pressure, which even allowing for the partial consolidation of the core that experience has shown occurs, would at least equal any water pressure against the completed dam. If, then, the hydraulic-fill dam or semihydraulic fill dam bears up under construction, its stability has been tested and a factor of safety established.

The factor of safety of the proposed dam, as computed appears to run from 2¼ during construction to to 5½ on consolidation of the core. It may be stated here, however, that mathematical reasoning and mathematical results on this point cannot be more than roughly approximate, because of the assumptions that have to be made on account of the changing condition of the core, weight of the embankment material, coefficients of friction etc.

Nevertheless, the figures given may be considered conservative for they do not take into account the stabilizing effect of the reenforcement of the upstream embankment by an independent rock-fill toe 72 feet in hight nor of the rock-fill wedge under the downstream embankment for increasing frictional resistance nor of the reenforcement of the downstream embankment by another rock-fill toe 50 feet in hight facedwith an arched concrete retaining wall 35 feet in hight.

The core, whose center is about 50 feet upstream from the center line of the dam, is 230 feet in width at its base and 40 feet in width at its top with an average slope of 10 on 5½ on its upstream side and 10 on 1½ on its downstream side. It is of the minimum size used in practice as its width at any point is slightly less if anything than the hight of the dam above that point. This, however, is not detrimental to the stability of the dam.

As a watertight structure depends entirely upon the core, the construction of the latter according to the specifications is to be kept under vigilant inspection and its material continually tested in order that it will be of the proper quality regarding the size and fitness of its particles, upon which so much depends relatice to the stability and imperviousness of the dam. Its stabilizing condition shall also be under constant inspection as on the pool a scow will be kept from which two men will test the core by the "pipe method", so called, that is, seeing how far they can push a 1½ inch pipe into it at different points.

In the construction of dams and in fact in all other kinds of construction work a solid foundation, it is needless to say, is of the first importance. It is most fortunate, then, that the foundation of the Cobble Mountain Dam is a very desirable one since not only the core but practically the whole dam is to rest on the solid rock. To make thos connection possible, all the earth on top of or covering the rock within the site of the dam, with the exception of a fringe around the perimeter, will be used as material for an sluiced into the dam.

To make a solid watertight bond between the core and the ledge any soft or defective rock within the core zone will be removed and a cutoff trench 80 feet wide will be excavated across the bed of the

stream carried in diminishing widths to the top of the dam. The depth of the trench is not fixed in the specifications as this will be governed by the quality of the rock as the excavation proceeds. Its minimum depth, however, is fixed at 5 feet. Where it crosses the streambed and also up the slopes if necessary it will be grouted.

For greater assurance that a watertight joint will exist between core and foundation, concrete cutoff walls will be built in the bottom of the trench across the streambed and up the slopes. These walls will extend in dowel fashion, so to speak, into both foundation and core thus breaking the joint between the surfaces and cutting off any water following the rock surface. With a foundation as described, and the methods to be used for bonding the dam thereto, it does not seem as if there could be any danger to the structure from this source.

In conclusion, the results of the analyses of the proposed dam, regarding its stability, show that all the criteria laid down by the best practice for a safe structure of this type have been complied with. Firstly the dam will rest on a solid rock foundation to which it will be thoroughly bonded. Secondly it is of heavy section having a substantial factor of safety, with its toes reenforced with rock-fill and masonry and its faces protected from erosion etc. by an adequate rock-fill rip-rap; Thirdly, it will have no outlet pipes or any other openings to threaten its safety. Fourthly, it will have an ample spillway located away from the dam. Fifthly, it will have a high factor of safety against high water and wave action over topping it, and last but not least, its construction will be of such a type that when completed, its stability can be considered as already tested and assurance given that from that time forward it will be ready to carry the burden for which it was designed.

In view of these facts and assuming that the construction work will be faithfully performed in the manner specified, the plans and specifications are recommended for your approval with the suggestion that consideration of the flashboards be deferred pending filing of the details as explained on page five.

In making this recommendation, it may be stated that in the analyses of the plans and spec-

TIGHE & BOND
CONSULTING ENGINEERS
189 HIGH STREET, HOLYOKE, MASS.

fications and also in comparing the plans with those of other dams of the same type that are rendering good service, the heavy responsibility placed upon the County has always been kept in mind because of the magnitude of the proposed structure, its rather novel type of construction in this locality, and the consequences that might follow its failure.

Respectfully,submitted,

James L. Tighe.

April 3, 1930

Mr. P. N. Hall,
15 Chestnut Street,
Westfield, Mass.

Dear Mr. Hall:

We have made arrangements with Mr. Lechridge to sit in with us on Wednesday afternoon, April 9th, at 3:30 o'clock to talk over matters concerning the construction of Cobble Mountain Dam, and we would be very glad to have you sit in with us to discuss same in an informal way.

Hoping to see you Wednesday afternoon, we are

Yours very truly,

COUNTY COMMISSIONERS

By_____
Chairman.

M/N

April 3, 1930

Mr. C. J. Little,
55 Court Street,
Westfield, Mass.

Dear Mr. Little:

We have made arrangements with Mr.Lochridge to sit in with us on Wednesday afternoon, April 9th, at 3:30 o'clock to talk over matters concerning the construction of Cobble Mountain Dam, and we would be very glad to have you sit in with us to discuss same in an informal way.

Hoping to see you Wednesday afternoon, we are

Yours very truly,
COUNTY COMMISSIONERS
By_____
Chairman.

M/M

REPORT
HAMPDEN COUNTY DAMS
1937

Dated, January 15, 1938

JAMES L. TIGHE
CONSULTING ENGINEER
190 High Street, Holyoke, Mass.

REPORT
HAMPDEN COUNTY DAMS
1937

MEMBER
AM. SOC. C. E.
INST. C. E. GREAT BRITAIN
ENG. INST. OF CANADA

JAMES L. TIGHE

CONSULTING ENGINEER
CALEDONIAN BUILDING, 189 HIGH STREET
HOLYOKE, MASS.
TELEPHONE 5525
MEMBER AM. INST. OF CONSULTING ENGINEERS, INC.

MEMBER
BOSTON SOC. C. E.
ENG. SOC. WEST. MASS.
AM. & N. E. W. W. ASSOC'S

WATER SUPPLY
SEWERAGE
SEWAGE DISPOSAL
ANALYSIS OF WATER

WATER POWER INVESTIGATIONS
AND DEVELOPMENT
DAMS AND POWER INSTALLATIONS
ESTIMATES AND APPRAISALS

December 31, 1937

The Hon. The Board of County Commissioners
Hampden County
Court House
Springfield, Mass.

Thomas J. Costello, Chairman,

Dear Sir:

The following report is an outline of the work done and matters attended to during the year in relation to the inspection and safety of the dams of the County.

In the beginning, it may be stated that, as referred to and arranged for in 1936, a complete volume of the descriptions of all the dams in the County has been prepared and appended to the report "Hampden County Dams 1936".

In that report, it will be remembered, there is contained a description of the Great Flood of March, 1936 in Hampden County, together with maps and graphs showing the heights of water and areas flooded along the courses of the Connecticut, Chicopee and Westfield Rivers. By adding to this 1936 report an appendix, containing a description of every dam in the County, there is made available in

a single volume a complete and ready reference to all the dams, together with the description and data of the greatest flood ever recorded in the County. This volume, which is now a part of the County Records, should prove to be not only a convenient reference for the County and all interested persons, but also a source of valuable data in the future, especially in regard to the Great Flood, since, it is probable, that another flood of such magnitude will not occur again for centuries.

The appendix makes in itself a rather sizable volume, containing 126 pages. In it is given all the essential data concerning each dam, including the name of the owner, location, drainage area, size and description of the dam and pond, and the purpose for which the structure is being used.

The total number of dams in the County, as listed in this appendix, is 356. Of this number 246 form ponds while 110 are derelicts and do not form ponds. Many of these derelicts were mill dams which once furnished power to small industries and, in many cases, were the centers of thriving hamlets, now practically all deserted.

Within the past ten years twenty-one new dams have been constructed in the County, although, to offset this increase, some of the older dams have passed into the derelict class.

Up until eight years ago the highest dam in the County was the Borden Brook Reservoir dam in Blandford, built in 1910, with a height of seventy-five feet. Since that time two new records for height have been established; first by the Westfield Water Works Storage Reservoir Dam in Granville, completed in 1929, which has a height of ninety feet above the natural streambed, and second by the Cobble Mountain Dam, completed in 1932, which has a height of 243 feet. This latter dam became not only the highest dam in the County and the State, but also the highest earthen dam in the World.

During the year, all of the dams forming ponds were visited and inspected twice. The first inspection was made in the Spring, to check up on any damage done by the Spring freshets. The second inspection was made in the early Fall in order to note any repairs which might be necessary before the winter set in.

Following the usual practice, inspections were made, as far as possible, in company with the owner, and the condition of the dam, together with any repairs needed thereon, was pointed out to him at the time. Besides all owners, whose dams needed repairs, were notified by the County by letter to have such repairs made.

During the year, final decrees of acceptance for substantial repairs made have been issued by the County in the case of the following six dams, namely; Piper Reservoir in West Springfield, raising of overflow; S. C. S. Box Company, Palmer, Mass. temporary repairs to dike; Hampden Brewery Company, Chicopee, extension of culverts; B. E. Campbell, Brimfield, repairs to Mill Pond dam; Strathmore Paper Company, Agawam, repairs to dam; and City of Chicopee overhauling and strengthening of the Bemis dam, so called, in Chicopee. The work of overhauling and strengthening the latter dam was completed during the past summer, and the pond and surrounding property have been converted into a municipal recreation park by the new owner, the City of Chicopee.

During the year two dams have been built in the County. The first of these is located on Elbow Brook in the Brimfield State Forest, and forms what is known as the Dingley Dell Pond. This dam was built by the State of Massachusetts, Department of Conservation, and apparently does not come under the jurisdiction of the County. It is the third dam to be built by the State in the Brimfield State Forest within the past few years.

The other new dam is located on the South Branch of Mill River in Wilbraham and was constructed by the Young Men's Hebrew Association of Springfield.

The plans and specifications for this structure, which forms a small pleasure pond, were approved by the County on July 14th, 1937, and the final decree of acceptance issued on Dec. 22, 1937.

Plans and specifications for two additional dams were also approved by the County during the year, namely, the Hampden Council of Boy Scouts dam at Camp John Robinson in Westfield, and the Charles E. Robbins dam on Conant Brook in Monson. Neither of these dams has been built as yet, but it is understood that the work will be done the coming year.

According to your instructions, following the complaint of Representative John J. Murphy of Westfield, regarding the noise and vibration caused by water falling over the crest of the lower Stevens Paper Mills Inc. dam in Westfield, a conference was held with Representative Murphy and President C. H. Stevens of the Corporation, at which President Stevens expressed the desire of the Corporation to correct the trouble if reasonably possible. It is only fair to state, however, that there is no question of the stability or safety of the structure involved, the only object being to lesson the noise and vibration caused by the water falling over it.

Respectfully submitted,

James L. Tighe

Dunlap Dam

- **Blandford**

Dam is inactive - Loring Lane. See also: Dam across Potash Brook for F R Dunlap in the County Highways Plan Book 6 Page 27 (ch06027).

City/Town	Blandford
Dam	Dunlap Dam
Name	Dunlap, Frank R
Streets	Loring Lane

BLANDFORD
D02007

DUNLAP DAM

NO IMAGE ON FILE FOR THIS RECORD

(INFORMATION EXISTS ONLY ON A FILE CARD FROM THE OFFICE OF THE FORMER HAMPDEN COUNTY ENGINEER.)

Fowler Dam fka Peebles Dam

1951 Blandford

Small dam on Fowler Hill Farm located on a tributary to Potash Brook near center of Blandford.

Abutters	Fowler Hill Farm
City/Town	Blandford
Dam	Pebbles Dam
Dam	Cobble Mountain Dam
Dam	Fowler Dam
Name	Fowler, George B
Name	Fowler, Ralf N
Name	Fowler, R N
Water	Potash Brook

October 3, 1945

Mr. Ralf N. Fowler

Blandford, Mass.

Dear Sir:

In accordance with the provisions of Chapter 253, Section 45 et seq. of the General Laws, Tercentenary Edition, relative to the inspection, condition and safety of the dams of Hampden County, you are hereby advised, that your dam located on the small tributary of Potash Brook has been inspected by our engineer and your attention is called to the following conditions noted and recommendations made by him:

> "Because of the low height of this dam, the small pondage formed thereby and the small drainage area contributary thereto, this structure may not come under the statutory limits established for the supervision of dams. Nevertheless, as a matter of information, I would recommend that the owner be advised of a leakage at the south end of the structure, which needs repairing, if the ice pond is to be maintained."

Any further information concerning this matter which you may desire will be furnished by this office upon request.

Yours very truly,
COUNTY COMMISSIONERS

By_____
Chairman

_____

_____

December 5, 1947

G. F. Fowler Estate
Blandford, Massachusetts

Dear Sir:

In accordance with the provisions of Chapter 253, Section 45 et seq. of the General Laws, Tercentenary Edition, relative to the inspection, condition and safety of the dams of Hampden County, you are hereby advised that the dam belonging to the estate and located on a tributary of Potash Brook in Blandford has been inspected by our Engineer and your attention is called to the following conditions noted and recommendations made by him:

"In a recent inspection made of the G. F. Fowler Estate dam located on a tributary of Potash Brook in Blandford, it was found that during the heavy fall rains, water had over-topped the dam and caused some scouring out of the structure. There is only about 2½ inches of freeboard between the top of the dam and the 12-inch corrugated pipe spillway. The fish screen placed in front of the spillway pipe interfered with the free flow of the water through the spillway causing the pond to raise and overflow the structure.

The fish screen should be permanently removed or the top of the dam should be raised to provide 24 inches of freeboard between the top of the spillway pipe and the top of the earthen embankment."

Any further information concerning this matter which you may desire will be furnished by this office upon request.

Yours very truly,

COUNTY COMMISSIONERS

By Charles W. Bray
Chairman

William Dwight

Thomas F. Sullivan

August 1, 1951

R. N. Fowler
North Street
Blanford, Mass.

Dear Sir:

In accordance with the provisions of Chapter 253, Section 45 et seq. of the General Laws, Tercentenary Edition, relative to the inspection, condition and safety of the dams of Hampden County, you are hereby advised that the dam located on a tributary to Potash Brook, near the center of Blanford, and listed in our records as being the property of the Fowler Estate of Blanford, has been recently inspected by our Engineer, and your attention is called to the following conditions noted and recommendations made by him:

"This dam has very little freeboard, and the lip of the spillway box was found partly plugged with lily pads. The earthfill section of the dam, downstream from the concrete wall, has been partly washed out. This condition indicates that the dam has been topped at some time in the recent past. The invert of the corrugated iron spillway pipe laid through the dam has been rusted out and the overflowing water trickles through the fill of the dam and emerges through the stone face at various points. If the pond is to be maintained, it would be advisable for the owner to correct the conditions herein noted."

Any further information concerning this matter which you may desire will be furnished by this office upon request.

Very truly yours,

COUNTY COMMISSIONERS

By William F. Stapleton
Chairman

Thomas F. Sullivan

Francis M. O'Keefe Acting County

Blanford

Commonwealth of Massachusetts

County of Hampden

Springfield, Mass.

Office of the
County Commissioners
52 State Street

William F. Stapleton
Chairman
Ralph P. Walsh
Floyd W. Fradet

October 1, 1969

Mr. George B. Fowler
Fowler Hill Farm
Blandford, Massachusetts

Dear Mr. Fowler:

In accordance with the provisions of Chapter 253, Section 45, et seq. of the General Laws, Tercentenary Edition, relative to inspection, condition and safety of the dams of Hampden County, you are hereby advised that your dam located on your farm in Blandford, Mass., has been recently inspected by our Engineer and your attention is called to the conditions noted and recommendations made by him.

"Fowler Dam

This dam is in the same general condition as noted and reported following the last inspection. However, the rotting culvert pipe thru the stone fill embankment has now caused settlement of the embankment. A settled area in the shape of a trough can be observed on the embankment surface directly above the spillway pipe location.

The owner should protect his investment in this small dam by digging out the existing rotten and failed spillway tube and then replace it with a new pipe.

The spillway entrance box was clean and in relatively good condition. Water level in storage was at the crest of the concrete walls of the spillway box.

Though this dam does not endanger persons and property downstream, it would seem advisable for the owner to replace the rotted spillway pipe with a new pipe. This will protect his investment in this dam."

Since your dam impounds a small quantity of water and since this stored water does not endanger persons and propery downstream, it is not a firm requirement that you replace the spillway tube as recommended by the County Hydraulic Engineer. However, since you do have a substantial investment in this dam and pond, it would seem to be in your best interest to maintain it properly. The

installation of a new inexpensive spillway tube now will protect your dam from further settlement and possible damage which might be more expensive to repair at a later date.

Any further information concerning this matter which you may desire will be furnished by this office upon request.

Very truly yours,

BOARD OF COUNTY COMMISSIONERS

_____

_____

_____

Waite Dam

- **Blandford**

See Also: Dam Report Section - Blandford.

City/Town	Blandford
Dam	Waite Dam
Name	Waite, H C

BLANDFORD
D02009

WAITE DAM

NO IMAGE ON FILE FOR THIS RECORD

(INFORMATION EXISTS ONLY ON A FILE CARD FROM THE OFFICE OF THE FORMER HAMPDEN COUNTY ENGINEER.)

Huntington Fire District Dam

1934 Blandford

Dam located on Cold Brook in Blandford off Route 20.

Abutters	Huntington Town Fire District - Water Commissioners
City/Town	Blandford
Dam	Huntington Fire District Dam
Streets	Route 20
Water	Cold Brook

Board Of Water Commissioners

HUNTINGTON, MASS.

Nov 22 1929

County Commissioners,

Court House,

Springfield, Mass.

Gentlemen.

This board wishes to report that they have had the repairs done as specified in your last letter to the best of our ability, the ground is frozen very hard and it was impossible to do as good a job as could have been in warm weather, there is nothing there that is dangerous. Next summer we will have to clean the reservoir and all other work that is necessary will be done at that time.

Very truly yours,

Board of Water Commissioners

Arthur L. Crum

By. Arthur L. Crum,

Chairman.

Copy of this letter sent to Mr. Tighe on Nov. 23, 1929

Chairman,
Hampden County Commissioners
Springfield, Mass.,

Dear Sir:

Some of the officials of the Huntington Fire District have recently inspected the Dam of the District which holds back the water which furnishes the District with water for domestic, fire and other purposes, and are of the opinion that the conditions are such that substantial repairs are necessary. We have no town or district engineer and no money to employ one to advise us as to what should be done. Upon inquiry of Mr. Weston, Chief Engineer of the State Department of Public Health, we learn that the County Commissioners are required by law to inspect such a dam and advise as to the condition of the same. To the end that such steps may be taken as may be necessary in the premises, we repsectfully request that you cause an examination of the dam to be made and advise us as to the conditions and what should be done. We will appreciate any help you can give us.

Very truly yours,

Don V. Mexas
Henry L. Carmel
Peter J. Regan
Prudential Committee

Arthur L. Crum
Walfred H. Allard
Richard F. Ford
Board of Water Commissioners

Joseph G. Oliver Treasurer

Richard F. Ford Chief Fire Dept.

August 9,1934

Arthur L. Crum
Box 456, Huntington,
Mass.

Dear Sir:

This will acknowledge receipt of your letter of July 23, 1934 with enclosure relative to the Dam which the Huntington Fire District Officials have inspected and found to be in need of repairs.

We are having our Engineer look into the matter and when we receive his report we will notify you.

Very truly yours,
COUNTY COMMISSIONERS

By_____
Chairman.

TJC/N

September 12,1934

Arthur L. Crum, Chairman,
Board of Water Commissioners
Huntington Fire District,
Box 456, Huntington, Mass.

Dear Sir:

In accordance with your request of August 27th, we are enclosing herewith copy of our Engineer's report on the dam of the Huntington Fire District.

Very truly yours,
COUNTY COMMISSIONERS

By_____
Chairman.

C/N
Enc.

Huntington Mass, Aug 27 1934.

Mr.Thomas J. Costello,Chairman,

Hampden County Commissioners.

Dear Sir:

Not having heard anything from you since we recieved your letter of Aug 9th, we are wondering if this has been overlooked, We are starting today to build the road to the Dam,and would appreciate the report of your engineer as soon as possible, I will go with him if he will notify me when he is coming and guide him to the Dam,as we are not in a position to ask for Federal Aide till after it has been inspected, and that we would like to submit for the September allotment.

Very truit yours,

Board of Water Commissioners

Huntington Fire District

By Chairman.

Huntington Water Supply
Cold Brook in Blandford.
Mr. Bond will check same.

Mr. Bray told Mr. Bond to
examine it.

Huntington, Mass. July 23, 1934

Mr. Thomas Costello, Chairman,

Hampden County Commissioners,

Springfield, Mass.

Dear Sir:

Inclosed find request from the several officials of the Huntington Fire District, we pray you give this your earliest consideration, as we want to get some Federal Funds to do this work.

Yours very truly,

Huntington Fire District

Board of Water Commissioners,

Arthur L. Crum

Chairman.

Address Arthur L. Crum

Box 456 Huntington, Mass.

MEMBER
AM. SOC. C. E.
INST. C. E. GREAT BRITAIN
ENG. INST. OF CANADA

JAMES L. TIGHE

CONSULTING ENGINEER
CALEDONIAN BUILDING, 189 HIGH STREET
HOLYOKE, MASS.
TELEPHONE 790
MEMBER AM. INST. OF CONSULTING ENGINEERS, INC.

MEMBER
BOSTON SOC. C. E.
ENG. SOC. WEST. MASS.
AM. & N. E. W. W. ASSOC'S

WATER SUPPLY
SEWERAGE
SEWAGE DISPOSAL
ANALYSIS OF WATER

WATER POWER INVESTIGATIONS
AND DEVELOPMENT
DAMS AND POWER INSTALLATIONS
ESTIMATES AND APPRAISALS

September 10, 1934

The Hon. The Board of County Commissioners
Hampden County
Court House
Springfield, Mass.

Thomas J. Costello, Chairman,

Dear Sir:

I have made an inspection of the Huntington Fire District water supply storage reservoir dam and report as follows:

While the Huntington Fire District is in Hampshire County the reservoir and dam are located on the slope of the mountain rising from the West Branch of the Westfield River just across the Hampshire-Hampden County line in a remote and almost inaccessible corner of the town of Blandford.

The dam, which is on Cold Brook, forms a small storage reservoir having a surface area of only one half acre and a capacity of only one and a quarter million gallons. The drainage area contributory is a little less than one square mile.

The dam is an earthen structure 150 feet in length and 20 feet in height. It is 10 feet wide on top with slopes of about one on two upstream and one on one and one-third downstream. The spillway is practically in the center of the structure with the gate house from which the supply and drain pipe lead, adjoining its east end. The spillway is 19 feet in length with its crest 2½ feet below the top of the dam and is built of stone masonry faced and capped with concrete. The channel leading therefrom has a stone masonry floor and a heavy stone masonry retaining wall on each side. The gate house is also of stone masonry, which is faced with concrete on its upstream side.

The retaining wall on the easterly side is in poor condition, showing considerable bulging. This bulging is greatest at about half the height of the wall where the masonry has moved outward about a foot from its original position. There is also some leakage near the water surface along that portion of the dam easterly from the spillway, where also some of the embankment on the downstream side has been removed by erosion.

Because of these conditions it is recommended that the easterly retaining wall of the spillway be strengthened and made stable, that the leakage be stopped and that earth material be placed in the embankment where erosion has occurred to restore the dam to its original section.

It is also recommended that the westerly retaining wall of the spillway channel be pointed with cement mortar and that any stones dislodged from the masonry in any part of the dam be reset.

Respectfully submitted,

James L. Tighe

November 14, 1939

The Board of Water Commissioners

Huntington, Mass.

Gentlemen:

In reply to your letter of Nov. 1st, last, relative to the repairs that had been made on your water supply dam after the damage done thereto by the hurricane flood of last year, we wish to state that our letter to you of Oct. 25th. last, was in reference to the present condition of the structure regarding the repairs now needed thereon, including the spreading, levelling up and compacting of the earth-fill dumped along its top and downstream slope, also, the raising of the fill along the walls of the overflow channel.

Yours very truly,

Charles W. Bray
Chairman

Thos. J. Costello

Edward J. Stapleton

MEMBER
AM. SOC. C. E.
INST. C. E. GREAT BRITAIN
ENG. INST. OF CANADA

JAMES L. TIGHE

CONSULTING ENGINEER
CALEDONIAN BUILDING, 189 HIGH STREET
HOLYOKE, MASS.
TELEPHONE 5525
MEMBER AM. INST. OF CONSULTING ENGINEERS, INC.

MEMBER
BOSTON SOC. C. E.
ENG. SOC. WEST. MASS.
AM. & N. E. W. W. ASSOC'S

WATER SUPPLY
SEWERAGE
SEWAGE DISPOSAL
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WATER POWER INVESTIGATIONS
AND DEVELOPMENT
DAMS AND POWER INSTALLATIONS
ESTIMATES AND APPRAISALS

November 14, 1939

The Hon. The Board of County Commissioners
Hampden County, Court House
Springfield, Mass.

Charles W. Bray, Chairman:

Dear Sir:

In regard to your letter dated Oct. 25th last to the Board of Water Commissioners of the Huntington Fire District, relative to repairs to be made on the District Water Supply dam, and the answer thereto from the Board of Water Commissioners stating that through a W.P.A. project, the damage done the structure by the flood of last year was repaired at the time, I would suggest that you draw the attention of the Board of Water Commissioners again to repairs needed on the structure at the present time including, the spreading, levelling up and compacting of the earth-fill along its top and downstream slope, also, the raising of the fill along the walls of the overflow channel.

Respectfully submitted,

James L. Tighe

MEMBER
AM. SOC. C. E.
INST. C. E. GREAT BRITAIN
ENG. INST. OF CANADA

JAMES L. TIGHE

CONSULTING ENGINEER
CALEDONIAN BUILDING, 189 HIGH STREET
HOLYOKE, MASS.
TELEPHONE 5525
MEMBER AM. INST. OF CONSULTING ENGINEERS, INC.

MEMBER
BOSTON SOC. C. E.
ENG. SOC. WEST. MASS.
AM. & N. E. W. W. ASSOC'S

WATER SUPPLY
SEWERAGE
SEWAGE DISPOSAL
ANALYSIS OF WATER

WATER POWER INVESTIGATIONS
AND DEVELOPMENT
DAMS AND POWER INSTALLATIONS
ESTIMATES AND APPRAISALS

October 21, 1939

The Hon. The Board of County Commissioners
Hampden County, Court House
Springfield, Mass.

Chales W. Bray, Chairman,

Dear Sir:

Having recently made an inspection of the Huntington Water Supply storage reservoir dam, located on Cold Brook in the town of Blandford, I would recommend that the attention of the Water Commissioners of the Huntington Fire District be drawn to the necessity of completing the repairs started some time ago on the structure, before the cold weather sets in.

Respectfully submitted,

Board Of Water Commissioners

HUNTINGTON, MASS.

Nov 1 1939

County of Hampden,

County Commissioners,

Gentlemen.

Yours of Oct 25 at hand and contents noted, and in reply would state that we had a W.P.A. project on the dam after the flood last year and finished repairs at that time.

Very truly yours,

Board of Water Commissioners,

Arthur L. Crum

Arthur L. Crum,

Chairman.

Copy of this letter sent to Mr. James L. Tighe on November 9, 1939.

August 7, 1940

Board of Water Commissioners

Huntington, Mass.

Gentlemen:

In accordance with the provisions of Chapter 253, Section 45 et seq. of the General Laws, Tercentenary Edition, relative to the inspection, condition and safety of the dams of Hampden County, you are hereby notified that your dam on Cold Brook in Blandford has been inspected by our engineer and your attention is called to the following conditions noted and recommendations made by him;

> "The downstream embankment on each side of the spillway of this dam is wearing down and should be repaired. When such repairs are being made, this embankment should be sloped at least 1 on 2, well loamed and grassed."

Any further information concerning this matter which you may desire will be furnished by this office upon request.

Yours very truly,

By_____
Chairman

_____

_____

December 21, 1949

Huntington Fire District
Huntington, Mass.

Gentlemen:

In accordance with the provisions of Chapter 253, Section 45 et seq. of the General Laws, Tercentenary Edition, relative to the inspection, condition and safety of the dams of Hampden County, you are hereby advised that your dam located on Cold Brook in Blanford has been inspected by our Engineer and your attention is called to the following conditions noted and recommendations made by him:

> "In a recent inspection made of the Huntington Fire District Dam, it was found that the earth dam at the west end of the concrete overflow has been washed and is sunken on the downstream face. To prevent further damage to the structure, the sunken area should be filled and brought to grade."

Any further information concerning this matter which you may desire will be furnished by this office upon request.

Yours very truly,

COUNTY COMMISSIONERS

By Thomas F. Sullivan
Chairman

Charles W. Bray

William F. Stapleton

RETURN RECEIPT

Received from the Postmaster the Registered or Insured Article, the original number of which appears on the face of this Card.

Board of Water Commissioners
(Signature or name of addressee)

Arthur J. Cunningham
(Signature of addressee's agent)

Date of delivery, AUG 8 1911, *193*

Form 3811

U. S. GOVERNMENT PRINTING OFFICE

November 22, 1950

Office of the Huntington Fire District
Russell Street
Huntington, Mass.

Gentlemen:

In accordance with the provisions of Chapter 253, Section 45 et seq. of the General Laws, Tercentenary Edition, relative to the inspection, condition and safety of the dams of Hampden County, you are hereby advised that your dam located in Blandford off of Route #20 has been recently inspected by our Engineer, and your attention is called to the following conditions noted and recommendations made by him:

> "The depression on the downstream face of the earth fill beside west spillway wall should be filled and brought to proper grade."

Any further information concerning this matter which you may desire will be furnished by this office upon request.

Very truly yours,

COUNTY COMMISSIONERS

By Thomas F. Sullivan
Chairman

William F. Stapleton

Francis M. O'Keefe
Acting County Commissioner

August 1, 1951

Office of the Huntington Fire District
Russell Street
Huntington, Massachusetts

Gentlemen:

In accordance with the provisions of Chapter 253, Section 45 et seq. of the General Laws, Tercentenary Edition, relative to the inspection, condition and safety of the dams of Hampden County, you are hereby advised that your dam located in Blanford, off of Route 20, has been recently inspected by our Engineer, and your attention is called to the following conditions noted and recommendations made by him:

"The brush and miscellaneous scrub growth should be cut from the face of the dam."

Any further information concerning this matter which you may desire will be furnished by this office upon request.

Very truly yours,

COUNTY COMMISSIONERS

By William F. Stapleton
Chairman

Thomas F. Sullivan

Francis M. O'Keefe
Acting County Commissioner

September 8, 1954

Office of the Huntington Fire District
Russell Street
Huntington, Mass.

Gentlemen:

In accordance with the provisions of Chapter 253, Section 45 et seq. of the General Laws, Tercentenary Edition, relative to the inspection, condition and safety of the dams of Hampden County, you are hereby advised that your dam located in Blandford off of Route 20 has been recently inspected by our Engineer. Your attention is called to the following conditions noted and recommendations made by him:

> "The growth of brush and small trees on the surface of the earth filled portion of the dam is becoming quite thick. This brush and scrub growth should be cut off and removed from the dam."

Any further information concerning this matter which you may desire will be furnished by this office upon request.

Very truly yours,

COUNTY COMMISSIONERS

By_____
Chairman

_____

_____

OFFICE OF

PRUDENTIAL COMMITTEE

HUNTINGTON FIRE DISTRICT

HUNTINGTON, MASSACHUSETTS

August 26, 1955.

Mr. Thomas Sullivan, Chairman
Hampden County Commission
Springfield, Massachusetts

Dear Sir:

The Board of Water Commissioners of the Huntington Fird District earnestly requests an inspection of the reservoir dam as soon as is possible, to assess damages and make recommendations to the Water Board as to repairs and so forth.

Please direct all communications to William E. Wellspeak, Chairman.

Very truly yours,

William E. Wellspeak

William E. Wellspeak, Chairman
Water Commissioners
Huntington Fire District

copy to George McDonnell, Engineer

Huntington Fire District Dam
Blandford

Lawler Dam

- **Blandford**

See Also: Dam Report Section - Blandford.

City/Town	Blandford
Dam	Lawler Dam

BLANDFORD
D02011

LAWLER DAM

NO IMAGE ON FILE FOR THIS RECORD

(INFORMATION EXISTS ONLY ON A FILE CARD FROM THE OFFICE OF THE FORMER HAMPDEN COUNTY ENGINEER.)

Long Pond Dam

1957 Blandford

Dam located at Long Pond.

City/Town	Blandford Town Water Department
City/Town	Springfield City Water Works
City/Town	Blandford
Dam	Long Pond Dam
Water	Long Pond

Feb. 6, 1957

Board of Water Commissioners
Blandford Water Department
Blandford, Massachusetts

Gentlemen:

In accordance with Chapter 253 of the General Laws of the Commonwealth of Massachusetts, the County Hydraulic Engineer has made an inspection of all dams in the Town of Blandford. Among these dams is the dam at Long Pond, now apparently owned by the Blandford Water Department.

A portion of the report of the Engineer reads as follows:

"The present owner should be notified of the fact that tree growth on the dam causing movement of the stone masonry should be cut down and that settled portions of the earth embankment should be filled. Also, stone masonry work should be repaired as needed along the spillway area."

The repairs as recommended in the report of the County Hydraulic Engineer should be made during 1957 and preferably as soon as weather conditions permit.

If you desire any further information on this matter, please do not hesitate to call upon us.

Very truly yours

BOARD OF COUNTY COMMISSIONERS

_____

_____

_____

November 22, 1967

Board of Water Commissioners
Blandford Water Department
Town of Blandford, Massachusetts

Gentlemen:

In accordance with the provisions of Chapter 253, Section 45, et seq. of the General Laws, Tercentenary Edition, relative to inspection, condition and safety of the dams of Hampden County, you are hereby advised that the dam at Long Pond in Blandford has been recently inspected by our Engineer and your attention is called to the conditions noted and recommendations made by him.

> "The stone work at the spillway on this earth embankment dam is still in need of maintenance and repair work. The capstone on the downstream wall just to the left of the spillway should be reset and realigned. The earth and the stump in the corner of the embankment at this location should be dug out so that this capstone and any others in the immediate area needing resetting can be reset and realigned. Stones forming the side walls of the spillway channel should be reset as needed.
>
> Tree growth occurring in the dam embankment itself should be cut down. Trees growing adjacent to and directly behind the stone masonry wall will eventually cause movement of the stones forming the wall and expensive maintenance will be required. If the trees are cut down and their growth discouraged in the future, the root action will cease and movement of the stone masonry will be controlled.
>
> Water level was at the spillway crest on the day of inspection, November 11, and no flashboards were on the crest. The toe area of the dam was found to be okay."

It is our understanding that Long Pond is now the source of water supply for your community. Maintenance of the dam and the safety of the structure is therefore of importance and concern to your Board. Consequently, the above report of the County Hydraulic Engineer is sent to you for your information and guidance.

Any further information concerning this matter which you may desire will be furnished by this office upon request.

Very truly yours,

BOARD OF COUNTY COMMISSIONERS

_____

_____

_____

Town of Blandford, Massachusetts

Water Department

August 30, 1968

Long Pond

County Commissioners
County of Hampden
Springfield, Mass 01100

Gentlemen:

The water commissioners and I went over and inspected the spillway on the earth embankment dam at Long Pond in Blandford. As your letter of November 22, 1967 stated, it does need repair. At our monthly meeting last Monday, we discussed the problem, and the question came up as to who is responsible to repair the spillway. As Springfield owns the pond, we think that they should be responsible for the upkeep.

We would like to get this settled as to who is responsible, and would like to meet with you to discuss the problem. Could you set up such a meeting in the very near future?

Thank you-
Sincerely,
Ronald A Wyman
Ronald A. Wyman, Supt

September 5, 1968

Mr. George H. McDonnell
County Hydraulic Engineer
Tighe & Bond
Holyoke, Massachusetts 01040

Dear Mr. McDonnell:

Enclosed is a copy of a letter sent by the Superintendent of the Water Department of the Town of Blandford to the County Commissioners.

Will you please furnish this office with the information that is requested in this letter and any recommendation you would care to make.

Very truly yours,

HAMPDEN COUNTY COMMISSIONERS

By_____
Chairman.

WFS:F

Enc.

GEORGE H. McDONNELL
PHILIP W. SHERIDAN
EDWARD J. BAYON

TIGHE & BOND CONSULTING ENGINEERS

CIVIL, SANITARY AND ELECTRICAL ENGINEERING
INVESTIGATIONS, REPORTS, PLANS AND SPECIFICATIONS
SUPERVISION OF CONSTRUCTION AND OPERATION

BOWERS AND PEQUOT STREETS
HOLYOKE, MASSACHUSETTS
TEL. JEFFERSON 3-3991

CD Blandford
September 11, 1968

The Honorable the Board of County Commissioners
52 State Street
Springfield, Massachusetts

Gentlemen:

Reference is made to the letter written to your Honorable Board by the Water Department of the Town of Blandford. The Water Department acknowledges your letter relative to the dam and spillway at the Long Pond. In your letter you advised the Water Commissioners of the Blandford Water Department of certain maintenance and repair work needed on the dam embankment and at the spillway. The letter from the Blandford Water Department points out that Springfield owns the pond and thus the Blandford Water Commissioners are of the opinion that Springfield should be responsible for the upkeep of the dam.

Your Board has requested me to furnish you with a recommendation regarding the matter of jurisdiction over the dam.

It is my opinion that if the City of Springfield or the Springfield Water Works own the pond and the dam, then maintenance of the dam should be the responsibility of Springfield. I am aware of the fact that the Town of Blandford Water Department uses Long Pond as its source of water supply and that the pond became the source of Blandford water supply at about the time the turnpike was constructed.

A few years ago the dam was apparently owned by the Peck Lumber Co. I have heard that the City of Springfield took it over in connection with operation of the water shed serving Cobble Mountain Reservoir. Long Pond is a sizeable body of water which drains into Wheeler Brook which in turn drains Peeble Brook, a feeder into the Cobble Mountain Reservoir.

I would assume that the Town of Blandford must have some sort of an agreement with the City of Springfield for use of the water of Long Pond if Long Pond and its dam are owned in fee by Springfield. My suggestion would be that the Blandford Water Commissioners investigate the basis for their use of Long Pond as a source of water supply and review the conditions and contents of any agreement with Springfield regarding the maintenance of the dam. If there is no particular section of an existing agreement spelling out responsibility for maintenance of the dam, and if the assessors' records in Blandford indicate definitely that title to the dam is in the City of Springfield, then I would recommend that the Blandford Water Department advise Springfield of the needed work to the dam to protect the structure and the Blandford water supply.

If your Board wishes, the undersigned would be pleased to contact the Springfield Water Department to find out if Springfield is the actual owner in fee of the dam. If I do find that Springfield owns the dam then a copy of the report on conditions at Long Pond Dam could be sent to the Springfield Water Works.

Very truly yours,

George H. McDonnell

George H. McDonnell
County Hydraulic Engineer

GHM/amd

September 19, 1968

John W. Peebles, Chairman
Board of Water Commissioners
Town of Blandford
Blandford, Massachusetts 01008

Dear Mr. Peebles:

The enclosed are copies of letters concerning the dam at Long Pond in the Town of Blandford.

They are being sent to you to keep you advised as to what is taking place.

Very truly yours,

HAMPDEN COUNTY COMMISSIONERS

By_____
County Counsel.

WJF:F

Enclosures

September 19,1968

Mr. George H. McDonnell
County Hydraulic Engineer
Tighe & Bond
Holyoke, Massachusetts 01040

Dear Mr. McDonnell:

The County Commissioners request that you determine from the Springfield Water Department if it is the actual owner in fee of the dam located in the Town of Blandford, said dam being on Long Pond in the Town of Blandford.

Very truly yours,

HAMPDEN COUNTY COMMISSIONERS

By_____
County Counsel.

WJF:F

GEORGE H. McDONNELL
PHILIP W. SHERIDAN
EDWARD J. BAYON

TIGHE & BOND CONSULTING ENGINEERS

CIVIL, SANITARY AND ELECTRICAL ENGINEERING
INVESTIGATIONS, REPORTS, PLANS AND SPECIFICATIONS
SUPERVISION OF CONSTRUCTION AND OPERATION

BOWERS AND PEQUOT STREETS
HOLYOKE, MASSACHUSETTS
TEL. JEFFERSON 3-3991

CD Blandford
September 24, 1968

The Honorable the Board of County Commissioners
52 State Street
Springfield, Massachusetts

Gentlemen:

Enclosed for your files please find a copy of a communication written to the Springfield Water Works requesting information as to the ownership of the Long Pond Dam in Blandford. On receipt of an answer to my communication, I will pass the information on to your Board.

Very truly yours,

George H. McDonnell

George H. McDonnell
County Hydraulic Engineer

GHM/amd
Encl.

September 24, 1968

Springfield Water Works
Springfield City Hall
Springfield, Massachusetts

Gentlemen:

Re: Long Pond Dam
Blandford, Mass.

The undersigned has made periodic inspections of the above subject dam and has noted that certain maintenance and repairs are desirable at the dam and at the spillway.

I am aware of the fact that the Town of Blandford uses Long Pond as its source of water supply.

In discussing ownership of the pond and the dam, I have learned that the Springfield Water Works has a definite interest in the pond and the dam.

Does the City of Springfield or the Springfield Water Works now own the dam and the land at the dam in fee? If not, what interest does the Springfield Water Works have in this facility?

As County Hydraulic Engineer in Hampden County, I wish to keep the records of dams up-to-date. I also wish to keep the owner of the dam informed as to any needed maintenance or repair work.

An early reply to the undersigned at the above address will be greatly appreciated.

Very truly yours,

George H. McDonnell
County Hydraulic Engineer
Hampden County, Mass.

GHM/amd

October 23, 1968

Springfield Municipal Water Works
City Hall
Springfield, Massachusetts

Attn: George E. Sweeney, Water Dept. Manager

Re: Long Pond Dam
Blandford, Mass.

Gentlemen:

Your communication to the County Hydraulic Engineer relative to ownership of Long Pond and surrounding property has been received by our Board. In view of the fact that you are the owner and would thus be responsible for the maintenance of the dam, the following is sent to you for your information and action.

"Long Pond Dam (Blandford Water Dept. and Springfield Water Works)

The stone work at the spillway on this earth embankment dam is still in need of maintenance and repair work. The capstone on the downstream wall just to the left of the spillway should be reset and realigned. The earth and the stump in the corner of the embankment at this location should be dug out so that this capstone and any others in the immediate area needing resetting can be reset and realigned. Stones forming the side walls of the spillway channel should be reset as needed.

Tree growth occurring in the dam embankment itself should be cut down. Trees growing adjacent to and directly behind the stone masonry wall will eventually cause movement of the stones forming the wall and expensive maintenance will be required. If the trees are cut down and their growth discouraged in the future, the root action

Water level was at the spillway crest on the day of inspection, November 11, and no flashboards were on the crest. The toe area of the dam was found to be okay."

The above has been taken from the inspection report of the County Hydraulic Engineer following his inspection of the dam a year ago. Recently, the Board of Water Commissioners of Blandford acknowledged the fact that work is necessary at the dam but brought up the point that Blandford did not own the pond and the Board of Water Commissioners was of the opinion that Springfield Water Works should do the necessary maintenance work.

A re-inspection of the dam will be scheduled in the not too distant future. At that time a determination will be made as to whether or not conditions as existing now are similar to those reported last Fall.

To protect your investment in this pond and dam, the recommended maintenance work should be done either this Fall or early in the Summer of 1969.

Very truly yours,

BOARD OF COUNTY COMMISSIONERS

_____

_____

_____

October 23, 1968

Board of Water Commissioners
Blandford Water Department
Town of Blandford, Massachusetts

Gentlemen:

Reference is made to your letter of August 30, 1968. We have contacted the Springfield Water Department and have received a communication from the Department Manager stating that Springfield owns Long Pond and the surrounding property, all subject to several easements.

In view of this statement, we have written a communication to the Springfield Water Works pointing out the recommended repair work as needed at the dam.

A copy of the communication from the Municipal Water Works of Springfield to the County Hydraulic Engineer is enclosed for your file.

Very truly yours,

BOARD OF COUNTY COMMISSIONERS

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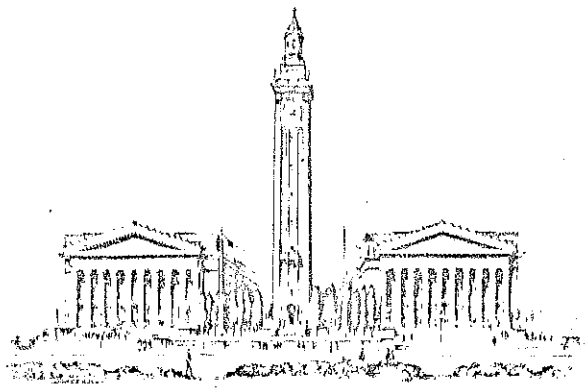
_____



THE CITY OF
SPRINGFIELD, MASSACHUSETTS
MUNICIPAL WATER WORKS

October 4, 1968

Mr. George H. McDonnell
County Hydraulic Engineer
c/o Tighe & Bond
Bowers and Pequot Sts.
Holyoke, Massachusetts 01040

Re: Long Pond Dam
Blandford, Mass.

Dear Sir:

In reply to your letter of September 24, 1968, the Springfield Water Works owns Long Pond and the surrounding property as of March 11, 1960 subject to several easements including one taken by the County Commission.

Very truly yours,

MUNICIPAL WATER WORKS

George E. Sweeney

GES:mps

George E. Sweeney
Water Department Manager

GEORGE H. McDONNELL
PHILIP W. SHERIDAN
EDWARD J. BAYON

TIGHE & BOND CONSULTING ENGINEERS

CIVIL, SANITARY AND ELECTRICAL ENGINEERING
INVESTIGATIONS, REPORTS, PLANS AND SPECIFICATIONS
SUPERVISION OF CONSTRUCTION AND OPERATION

BOWERS AND PEQUOT STREETS
HOLYOKE, MASSACHUSETTS
TEL. JEFFERSON 3-3991

CD Blandford
October 16, 1968

The Honorable the Board of County Commissioners
52 State Street
Springfield, Massachusetts

Re: Long Pond Dam
Blandford, Mass.

Gentlemen:

In regard to the above subject dam and the various communications relative thereto since the communication from the Blandford Water Dept. dated August 30, 1968, I have determined that the Springfield Water Works owns Long Pond and the surrounding property as of March 11, 1960. I am attaching hereto, two copies of the letter from George E. Sweeney, Water Dept. Manager relative to this fact. The contents of the letter are self-explanatory.

A copy of the enclosed letter from the Springfield Water Dept. should probably be sent to the Board of Water Commissioners of the Town of Blandford for their file. A suggested communication to the Blandford Water Dept. is included herewith.

I am also including a communication to the Springfield Water Dept. relative to the condition of Long Pond Dam. The contents are self-explanatory.

Very truly yours,

George H. McDonnell

George H. McDonnell
County Hydraulic Engineer

GHM/amd
Encl.

Peck Lumber Company Dam fka Gibbs Dam

1948 Blandford

Dam on tributary to Wheeler Brook.

City/Town	Blandford
Dam	Peck Lumber Company Dam
Dam	Gibbs Dam
Name	Peck Lumber Company
Name	Gibbs, Albert
Water	Wheeler Brook

Albert Gibbs
North Blandford Mass.

you are notified that your dam, located on Wheeler Brook so called in the Town of Blandford, etc.

"The dam is not in very good condition as it leaks considerably, and it is recommended that the structure be repaired or the pond drawn down."

Now, therefore, etc.

March 10, 1926

Mr. Albert Gibbs,
North Blandford, Mass.

Dear Sir;

In accordance with the provisions of Section 45 of Chapter 253 of the General Laws as amended by Chapter 334 of the Acts of 1923 and as further amended by Chapter 178 of the Acts of 1924 relative to the inspection, condition and safety of the dams of Hampden County, you are notified that your dam, located on Wheeler Brook so-called in the Town of Blandford, has been inspected by our engineer and your attention is called to the following recommendations made by him;

> "The dam is not in very good condition as it leaks considerably, and it is recommended that the structure be repaired or the pond drawn down."

Now, therefore, in accordance with Section 46 of said Chapter 253, it is ordered that the above recommendations be complied with in a reasonable time.

Yours very truly,

COUNTY COMMISSIONERS

By_____
Chairman

_____

_____

Peck Lumber Company Dam fka Lincoln Dam

1926 Blandford

Dam location on Long Pond.

City/Town	Blandford
Dam	Peck Lumber Company Dam
Name	Peck Lumber Company
Name	Lincoln, E K
Water	Long Pond

Mrs. E. K. Lincoln,
Blandford, Mass.

you are notified that your dam,
located on the outlet of Long Pond so called in the
Town of Blandford, etc.

"The dam was built in 1898 and
is in good condition except the east
retaining wall of the spillway, where
some of the stone-work has been
removed which should be repaired"

Now, therefore, etc.

March 10, 1926

Mrs. E. K. Lincoln,
Blandford, Mass.

Dear Madame:

In accordance with the provisions of Section 45 of Chapter 253 of the General Laws as amended by Chapter 334 of the Acts of 1923 and as further amended by Chapter 178 of the Acts of 1924 relative to the inspection, condition and safety of the dams of Hampden County, you are notified that your dam, located on the outlet of Long Pond so-called in the Town of Blandford, has been inspected by our engineer and your attention is called to the following recommendations made by him;

> "The dam was built in 1898 and is in good condition except the east retaining wall of the spillway, where some of the stone-work has been ruptured which should be repaired."

Now, therefore, in accordance with Section 46 of said Chapter 253, it is ordered that the above recommendations be complied with in a reasonable time.

Yours very truly,

COUNTY COMMISSIONERS

By_____
Chairman.

Blandford, Mass.

March, 1926.

County Commissioners
Springfield, Mass.

Gentlemen:

In reply to your recent communication, would like some information regarding the subject of the dam Long Pond.

If the dam Long Pond was declared a state body of water, am I legally responsible for the condition of this dam, and am I supposed to keep the retaining walls in condition?

Thanking you for the above information, I am

Very truly your,

Albert S. Lincoln

A.O.S./A.O.L.

Mrs E M Lincoln

April 9, 1926

Mrs. E. K. Lincoln,
Blandford, Mass.

Dear Madam:

Replying to your letter of recent date, I take it that you are responsible for the condition of the dam and if the retaining walls are a part of the dam, you are responsible for the condition of the retaining walls. You should comply with suggestions noted in our letter to you of March 10th, 1926.

Yours very truly,
COUNTY COMMISSIONERS
By_____
Chairman.

GSC/N

Long Pond Dam
Blandford

November 17, 1926

Mrs. E. K. Lincoln,
Blandford, Mass.

Dear Madam:

Inasmuch as your dam was inspected quite recently by our Engineer who found that no repairs had been made thereon, your attention is called to the notice sent to you on March 10, 1926 of which a copy is herewith enclosed.

In case you would like further information regarding the repairs required than that contained in notice, should you communicate or call upon our Engineer, James L. Tighe of the firm of Tighe & Bond, 189 High St., Holyoke, Mass., he will be glad to advise you.

Yours very truly,

COUNTY COMMISSIONERS

By_____
Chairman.

_____

_____

C/N
Enc.

June 24, 1936

Mrs. E. K. Lincoln,
Blandford, Mass.

Dear Madam:

In accordance with the provisions of section 45 of Chapter 253 of the General Laws as amended by Chapter 334 of the Acts of 1923 and as further amended by Chapter 178 of the Acts of 1924 relative to the inspection, condition and safety of the dams of Hampden County, you are notified that your dam, located on the outlet of Long Pond so-called in the Town of Blandford, has been inspected by our engineer and your attention is called to the following recommendations made by him;

> "The masonry spillway needs some repairing, especially at its east end where one of the heavy crest stones 8 feet in length has been dislodged, apparently by ice action. In making the needed repairs on the spillway, this stone should be properly reset in place".

Yours very truly,

COUNTY COMMISSIONERS

By Thos. J. Costello
Chairman.

Chas. W. Bray

Maurice G. Donahue

October 3, 1945

Peck Lumber Co.
Coleman Avenue
Westfield, Mass.

Gentlemen:

In accordance with the provisions of Chapter 253, Section 45 et seq. of the General Laws, Tercentenary Edition, relative to the inspection, condition and safety of the dams of Hampden County, you are hereby advised that your two dams No. 1 and No. 2 in the Town of Blandford, (No1 located on Wheeler Brook and No. 2 on the outlet of Long Pond) have been inspected by our engineer and your attention is called to the following conditions noted and recommendations made by him;

> "The drift-wood and debris in front of and blocking up the spillway of this No. 1 structure, should be removed."
>
> "The down stream masonry wall of the west abutment of this No. 2 structure and the earth-fill behind wall need repairs."

Any further information concerning these structures which you may desire will be furnished by this office upon request.

Yours very truly,

COUNTY COMMISSIONERS

By_____
Chairman

_____

_____

COPY

November 5, 1948

Peck Lumber Company
Coleman Avenue
Westfield, Massachusetts

Gentlemen:

In accordance with the provisions of Chapter 253, Section 45 et seq. of the General Laws, Tercentenary Edition, relative to the inspection, condition and safety of the dams of Hampden County, you are hereby advised that your Lincoln Pond Dam located on Wheeler Brook in Blandford has been inspected by our Engineer and your attention is called to the following conditions noted and recommendations made by him:

> "In a recent inspection made of Lincoln Pond Dam located on Wheeler Brook in Blandford and owned by the Peck Lumber Company, it was found that the earth embankment along the spillway wing walls has settled and washed and in need of repairs. A white birch tree at the northwest corner of the spillway is endangering the spillway structure and should be cut down immediately."

Any further information concerning this matter which you may desire will be furnished by this office upon request.

Yours very truly,

COUNTY COMMISSIONERS

Charles W. Bray
Chairman

William Dwight

Thomas F. Sullivan

December 21, 1949

Peck Lumber Company
Coleman Aveme
Westfield, Mass.

Gentlemen:

In accordance with the provisions of Chapter 253, Section 45 et seq. of the General Laws, Tercentenary Edition, relative to the inspection, condition and safety of the dams of Hampden County, you are hereby advised that your dam located on Wheeler Brook in Blanford has been inspected by our Engineer and your attention is called to the following conditions noted and recommendations made by him:

> "In a recent inspection made of Gidds Dam, so called, located on Wheeler Brook in Blanford and owned by the Peck Lumber Company, it was found that the dam is still in a dilapidated state and that no repairs of any consequence have been made. This dam should be repaired at once, or breached to allow for free passage of water during times of heavy stream flow."

Any further information concerning this matter which you may desire will be furnished by this office upon request.

Yours very truly,

COUNTY COMMISSIONERS

By Thomas F. Sullivan
Chairman

Charles W. Bray

William F. Stapleton

November 22, 1950

Peck Lumber Co.
Coleman Avenue
Westfield, Mass.

Gentlemen:

In accordance with the provisions of Chapter 253, Section 45 et seq. of the General Laws, Tercentenary Edition, relative to the inspection, condition and safety of the dams of Hampden County, you are hereby advised that your dams on Long Pond and the dam on the tributary to Wheeler Brook off North Blandford Road in Blandford have been recently inspected by our Engineer, and your attention is called to the following conditions noted and recommendations made by him:

A. Gidd Dam in Blandford: "The dam is in a dilapidated state and it should be repaired or breached immediately."

B. Lincoln Dam on Long Pond in Blandford: "A leak along the blowoff pipe should be investigated. The earth fill should be brought to grade along the spillway wing walls and a white birch growing at the northwest corner of the spillway wall should be cut down."

Any further information concerning this matter which you may desire will be furnished by this office upon request.

Very truly yours,

COUNTY COMMISSIONERS

By Thomas F. Sullivan
Chairman

William F. Stapleton

Francis M. O'Keefe

Acting Coun
Commissione

August 1, 1951

Peck Lumber Company
Coleman Avenue
Westfield, Mass.

Gentlemen:

In accordance with the provisions of Chapter 253, Section 45 et seq. of the General Laws, Tercentenary Edition, relative to the inspection, condition and safety of the dams of Hampden County, you are hereby advised that your dam located on the tributary to Wheeler Brook, off of North Blanford Road in Blanford, and your dam on Long Pond in Blanford, have been recently inspected by our Engineer, and your attention is called to the following conditions noted and recommendations made by him:

> Former Gibb Dam: "This dam is in a dilapidated state and should be repaired or breached immediately. This recommendation has been made previously, but the owner has failed to follow the recommendation. If the dam is neither repaired or properly breached in the near future, then action under Chapter 253, Section 47 and 48 et seq. of the General Laws, Tercentenary Edition, is recommended."
>
> Former Lincoln Dam: "There is some leakage through the dam in the vicinity of the blowoff pipe. Earthfill should be brought to grade along the spillway wing walls, and the white birch growing at the northwest corner of the spillway wall should be cut down. This is the same recommendation made last year. The danger of the dam washing out is not great. Removal of the birch tree would be a very inexpensive and simple matter, and would eliminate the greatest danger to the safety of the dam. Filling of the depressions with earth and gravel is a minor item, and could be attended to when the tree is removed. The leakage washes through very little earth and could probably be easily controlled by filling upstream, and consolidation of the dam fill around the drawoff pipe after the tree is removed. In general, the dam is in good condition and the pond formed behind it quite large. It would seem advisable for the owner to protect this property by the expenditure of the small amount of time and money required to follow outthese recommendations."

Any further information concerning this matter which you may desire will be furnished by this office upon request.

Copy of paragraph from letter to
Peck Lumber Company, Coleman
Avenue, Westfield, Mass.

Dated August 1, 1951

Former Lincoln Dam: " there is some leakage through the dam in the vicinity of the blowoff pipe. Earthfill should be brought to grade along the spillway wing walls, and the white birch growing at the northwest corner of the spillway wall should be cut down. This is the same recommendation made last year. The danger of the dam washing out is not great. Removal of the birch tree would be a very inexpensive and simple matter, and would eliminate the greatest danger to the safety of the dam. Filling of the depressions with earth and gravel is a minor item, and could be attended to when the tree is removed. The leakage washes through very little earth and could probably be easily controlled by filling upstream, and consolidation of the dam fill around the drawoff pipe after the tree is removed. In general, the dam is in good condition and the pond formed behind it quite large. It would seem advisable for the owner to protest this property by the expenditure of the small amount of time and money required to ~~fixxx~~ follow out these recommendations."

SIGNED:

COUNTY COMMISSIONERS

October 14, 1953

Peck Lumber Co.
Coleman Ave.
Westfield, Mass.

Gentlemen:

In accordance with the provisions of Chapter 253, Section 45 et seq. of the General Laws, Tercentenary Edition, relative to the inspection, condition and safety of the dams of Hampden County, you are hereby advised that your dam located on Long Pond in Blandford has been recently inspected by our Engineer, and your attention is called to the following conditions noted and recommendations made by him:

"The stone masonry of the dam at the left side of the spillway is being displaced by the roots of a birch tree. To prevent failure of this portion of the structure the birch tree should be cut down and the stone masonry realigned."

Any further information concerning this matter which you may desire will be furnished by this office, upon request.

Very truly yours,

COUNTY COMMISSIONERS

By_____
Chairman

_____

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Paragraph from letter to Peck Lumber Company, Coleman Ave., Westfield, Mass.

Dated August 1, 1951

FORMER GIBB DAM: "This dam is in a dilapidated state and should be repaired or breached immediately. This recommendation has been made previously, but the owner has failed to follow the recommendation. If the dam is neither repaired or properly breached in the near future, then action under Chapter 253, Section 47 and 48 et seq. of the General Laws, Tercentenary Edition, is recommended."

Signed

COUNTY COMMISSIONERS

September 8, 1954.

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Peck Lumber Co.
Coleman Avenue
Westfield, Mass.

Gentlemen:

In accordance with the provisions of Chapter 253, Section 45, et seq. of the General Laws, Tercentenary Edition, relative to the inspection, condition and safety of the dams of Hampden County, you are hereby advised that your dam located on Long Pond in Blandford has been recently inspected by our Engineer, and your attention is called to the following conditions noted and recommendations made by him:

"The spillway is in need of maintenance and repair. The stone work, particularly at the left front corner of the spillway section, is being displaced by a birch tree and to prevent further displacement of the stone work, it is advisable that the birch tree be cut down and removed. The stone masonry can then be realigned and releveled. The general condition of the dam is not dangerous but preventive maintenance now will preclude major repairs at some future date."

Any further information concerning this matter which you may desire will be furnished by this office upon request.

Very truly yours,

COUNTY COMMISSIONERS

By_____
Chairman

_____

_____

October 7, 1959

Peck Lumber Co.
South Broad Street
Westfield, Mass.

Gentlemen:

In accordance with the provisions of Chapter 253, Section 45, et seq. of the General Laws, Tercentenary Edition, relative to the inspection, condition and safety of the dams of Hampden County, you are hereby advised that the dam at Long Pond in Blandford has been recently inspected by our Engineer and your attention is called to the following conditions noted and recommendations made by him.

> "This dam forms a body of water known as Long Pond. Long Pond is now the source of water supply for the Town of Blandford. Though Blandford apparently owns water rights in the pond and has land posted around the pond, the dam itself is apparently still owned by the Peck Lumber Co. Long Pond became the Town water supply when the Town lost its old supply as the result of the construction of the Mass. Turnpike.
>
> Stone masonry at the spillway requires maintenance and repairs. Tree growth on the dam should be cut down and removed."

Any further information concerning this matter which you may desire will be furnished by this office upon request.

Very truly yours,

BOARD OF COUNTY COMMISSIONERS

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End of Book D02 ~ Dams ~ Town of Blandford